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REMARKS

Applicant wishes to thank the Examiner for the attention accorded to the instant application. Claims 1-20 and 26-45 are pending, and claims 21-23 and 46-48 are withdrawn.

Claims 1-6, 9-23, 26-31 and 34-43 are rejected under 35 U.S.C. 102(c) as being anticipated by Sickmiller (U.S. 6,214,733B1). Applicants respectfully disagree with the assertion that Sickmiller anticipates claims 1-6, 9-23, 26-31 and 34-43.

With respect to claims 1-6 and 9-20, all of these claims have the limitations of claim 1, whereby a method of fabricating a vertical microelectromechanical device is provided comprising the steps of: providing a bulk substrate; selectively creating strong bond regions and weak bond regions on said substrate; providing a first bonded semiconductor layer vertically supported on said substrate; creating an electrode on said first bonded semiconductor layer, said electrodes corresponding to said weak bond regions; creating an actuatable element disposed opposite said electrode; removing said first semiconductor layer from said bulk substrate; and bonding said first semiconductor layer to a second semiconductor layer.

This is in contrast to the description by Sickmiller. In particular, the Examiner has cited column 7, lines 55-65, and column 8, lines 35-44 as anticipating the element of claim 1 reciting "selectively creating strong bond regions and weak bond regions on said substrate". However, Sickmiller in general, and particularly the sections cited by the Examiner, are directed to a system whereby the thin film devices 20 are attached to a substrate 28 with bonding material 30 (see, e.g., column 7, lines 5-20, and Figure 13). Further, the Examiner has cited the etch stop layer 24 as associated with the device 20 as anticipating the following element of claim 1: "creating an electrode on said first bonded semiconductor layer, said electrodes corresponding to said weak bond regions". The Examiner has indicated that the etch stop layer 24 is equivalent to the first bonded semiconductor layer of claim 1. Further, the Examiner has not cited any portion of Sickmiller to anticipate the portion of the claim whereby "said electrodes corresponding to said weak bond regions". Other fundamental differences exist between Sickmiller and the present claim 1. It is respectfully submitted that this is not the same, and claim 1

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should be allowable over the cited references. Claims 2-6 and 9-20, by their dependency on independent claim 1, are similarly allowable.

With respect to claims 26-31 and 34-43, all of these claims have the limitations of claim 26, whereby a method of fabricating a multi layer microfluidic device is provided comprising the steps of: providing a bulk substrate; selectively creating strong bond regions and weak bond regions on said substrate; providing a first bonded semiconductor layer vertically supported on said substrate; creating a port on said first bonded layer, said port corresponding to said weak bond regions; creating an channel mechanically coupled to said port; ; removing said first layer from said bulk substrate; and bonding said first layer to a second layer.

This is in contrast to the description by Sickmiller. In particular, the Examiner has cited column 7, lines 55-65, and column 8, lines 35-44 as anticipating the element of claim 1 reciting "selectively creating strong bond regions and weak bond regions on said substrate". However, Sickmiller in general, and particularly the sections cited by the Examiner, are directed to a system whereby the thin film devices 20 are attached to a substrate 28 with bonding material 30 (see, e.g., column 7, lines 5-20, and Figure 13). Further, the Examiner has cited the etch stop layer 24 as associated with the device 20 as anticipating the following element of claim 26: "creating a port on said first bonded layer, said port corresponding to said weak bond regions; ". The Examiner has indicated that the etch stop layer 24 is equivalent to the first bonded layer of claim 26. Further, the Examiner has not cited any portion of Sickmiller to anticipate the portion of the claim whereby "said port corresponding to said weak bond regions". Other fundamental differences exist between Sickmiller and the present claim 26. It is respectfully submitted that this is not the same, and claim 26 should be allowable over the cited references. Claims 27-31 and 34-43, by their dependency on independent claim 26, are similarly allowable.

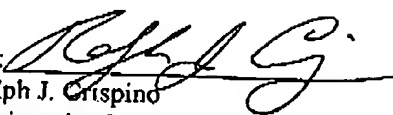
In addition to the rejections based on 35 U.S.C. 102(e), the Examiner has also rejected claims 7-8 and 32-33 under 35 U.S.C. 103(a) as being unpatentable over Sickmiller, and claims 24-25 and 44-45 under 35 U.S.C. 103(a) as being unpatentable over Sickmiller in view of Zavracky et al. (U.S. 5,976,953). Claims 7-8, by their dependency on independent claim 1 discussed above, are similarly allowable. Claims 44-

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45, by their dependency on independent claim 26 discussed above, are similarly allowable.

Applicants respectfully submit that claims 1-20 and 26-45 are in condition for allowance. Early and favorable action to that effect is earnestly solicited.

Respectfully submitted,

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